

**Block view of the study programme**

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**Block 1**
**Compulsory courses**

LANG9999-1	<i>Mastery of the French language</i>	Q2	30	-	-	<b>5</b>
ZENS0013-1	<i>Teaching methodologies and learning processes</i> - Annick FAGNANT, Charlène LEROY, Bertrand MONVILLE	Q1	35	-	-	<b>5</b>
ZENS0015-1	<i>Professional identity, ethics, and managing critical incidents</i> - Davian BIETS, JeanFrançois GUILLAUME	Q1	12	-	-	<b>2</b>
ZENS0014-1	<i>Class management, class environment and specific behavioural needs</i> - Ariane BAYE, Jérémy BONNI	Q1	12	-	-	<b>2</b>
ZENS0127-1	<i>Teaching methodology for mathematics (part I)</i> - Kevin BALHAN	Q1	18	-	-	<b>3</b>
HULG9829-1	<i>Information and communication technologies for education (ICTE)</i> - Carole DELFORGE	Q1	12	-	-	<b>2</b>
ZENS0019-1	<i>Media education</i> - Thomas JUNGBLUT	Q2	12	-	-	<b>2</b>
ZENS0030-1	<i>Évaluation et différenciation</i> - <i>Partie pédagogique</i> - Marie COLLET, Annick FAGNANT, Deborah MEUNIER, Deborah MEUNIER, Pierre OUTERS, Paul PIETQUIN, Germain SIMONS - <i>Partie didactique</i>	Q2	18	-	-	<b>4</b>
ZENS0064-1	<i>Introduction to research in education and teaching methodology</i> - Kevin BALHAN, Marie HOUSEN, Mickaël IDRAC, Doriane JAEGERS, Pierre LERUSSE, Grégory VOZ, Christophe WINKIN	Q2	30	-	-	<b>5</b>
SSTG0173-1	<i>Internship in mathematics (part 1)</i> - <i>Observation internship and professional training workshop</i> - Hervé BERNARD, Annick FAGNANT, Géraldine GODET, Pierre LORIAUX, Laurent MULLENS BOXHO, Margaux NOIZET, Virginie OGER, Coline VINCENT - [10h Internship] - <i>Teaching internship A and professional training workshop</i> - Kevin BALHAN, Christophe WINKIN - [8h Internship] - <i>Teaching internship B and professional training workshop</i> - Kevin BALHAN, Annick FAGNANT, Christophe WINKIN - [12h Internship]	TA	-	5	[+]	<b>10</b>
MATH2483-2	<i>History of mathematics</i> - <i>Part 1: History of mathematics</i> - Kevin BALHAN, Pierre MATHONET, Naïm ZENAÏDI - <i>Part 2 - Additional history and the epistemology of mathematics</i> - Kevin BALHAN, Pierre MATHONET, Naïm ZENAÏDI	Q2	25	20	-	<b>9</b>

**Optional courses**

With the agreement of the board of examiners, select courses not already chosen, for a total of 16 credits, from the following:

MATH0463-1	<i>Functional analysis</i> - Céline ESSER - [20h Mon. WS]	Q1	30	10	[+]	<b>8</b>
MATH0489-1	<i>Lie algebra</i> - Pierre MATHONET - [20h Mon. WS]	Q2	30	10	[+]	<b>8</b>
MATH0512-1	<i>Functional spaces and representational families</i> - Françoise BASTIN, Samuel NICOLAY - [20h Mon. WS] (Even years)	Q1	30	10	[+]	<b>8</b>
MATH0513-1	<i>Functional spaces relating to measurement theory</i> - Samuel NICOLAY - [20h Mon. WS] (Even years)	Q2	30	10	[+]	<b>8</b>
MATH0083-1	<i>Ergodic theory</i> - Julien LEROY (Even years)	Q1	30	20	-	<b>8</b>
MATH0075-1	<i>Discrete mathematics</i> - Manon STIPULANTI (Even years)	Q1	30	20	-	<b>8</b>
STAT0725-2	<i>Bayesian statistics</i> - [20h Mon. WS] (Even years)	Q2	30	10	[+]	<b>8</b>
STAT0727-2	<i>Non-parametric statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Even years)	Q1	30	10	[+]	<b>8</b>

MATH2022-1	<i>Monte Carlo methods in statistics</i> (english language) - Arnout VAN MESSEM - [40h Proj.] (Even years)	Q2	24	12	[+]	<b>8</b>
MATH0209-3	<i>Measure Theory</i> - Samuel NICOLAY - [20h Mon. WS] (Odd years)	Q1	30	10	[+]	<b>8</b>
MATH0514-1	<i>Stochastic analysis</i> - Laurent LOOSVELDT - [20h Proj.] (Even years)	Q2	30	10	[+]	<b>8</b>
INFO0212-2	<i>Algorithmics and computability</i> - Emilie CHARLIER (Odd years)	Q1	30	20	-	<b>8</b>
MATH0470-1	<i>Combinatorics on words</i> (english language) - Manon STIPULANTI (Odd years)	Q1	30	20	-	<b>8</b>
MATH0079-1	<i>Stochastic process</i> - Laurent LOOSVELDT - [20h Proj.] (Odd years)	Q2	30	10	[+]	<b>8</b>
STAT0082-1	<i>Multivariate statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Odd years)	Q1	30	10	[+]	<b>8</b>
MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Julien LEROY - [20h Mon. WS] (Odd years)	Q2	30	10	[+]	<b>8</b>
MATH2011-1	<i>Linear algebra supplements</i> - Laurent LOOSVELDT	Q1	30	20	-	<b>5</b>
MATH0503-1	<i>Logic and mathematical approach of programming</i> - Michel RIGO - [30h Mon. WS]	Q1	20	-	[+]	<b>4</b>
MATH0499-1	<i>Graph theory</i> - Michel RIGO	Q1	25	20	-	<b>4</b>
MATH0246-2	<i>Algebraic structures</i> - Julien LEROY	Q1	30	30	-	<b>7</b>

## Block 2

### Compulsory courses

ZENS0016-1	<i>The educational system and actors of change</i> - Ariane BAYE, COLLÉGIALITÉ, Géraldine GODET, N...	TA	12	15	-	<b>3</b>
ZENS0017-1	<i>Organisation of a school establishment and collaborative working</i> - JeanFrançois GUILLAUME, Tulay TASKIN	Q1	12	-	-	<b>2</b>
ZENS0235-1	<i>Teaching methodology for mathematics</i> - Kevin BALHAN	Q1	30	-	-	<b>5</b>
HULG0293-1	<i>Mathematics and associated teaching methodology</i> - Ann DERLET	Q1	30	-	-	<b>5</b>
ZENS0227-1	<i>Teaching methodology for mathematics (part II)</i> - Kevin BALHAN	Q2	18	-	-	<b>3</b>
SSTG0273-1	<i>Internship in mathematics (part 2) and professional training workshop</i> - Kevin BALHAN, Hervé BERNARD, Annick FAGNANT, Géraldine GODET, Pierre LORIAUX, Laurent MULLENS BOXHO, N..., Virginie OGER, Coline VINCENT, Christophe WINKIN - [40h Internship]	Q2	-	21	[+]	<b>11</b>
ZENS0022-1	<i>The philosophy of education: ethics, neutrality, citizenship</i> - Géraldine BRAUSCH, Anne HERLA	Q2	18	-	-	<b>3</b>
HULG9830-1	<i>Collegial facets of the profession</i> - Anne CAMPO, Dorothée JARDON, Charlene LEROY, Margaux NOIZET	TA	24	-	-	<b>4</b>
HULG0588-1	<i>Didactic aspects of the transition with the core curriculum: mathematics</i> - Christine GÉRON - [20h Internship]	TA	24	-	[+]	<b>4</b>
SMEM0050-1	<i>Final thesis</i>	TA	-	-	-	<b>20</b>

### Bloc d'aménagement du programme de l'année

## Bridging courses Master in teaching, section 4: mathematics

### Optional courses

[...] List of courses

MATH0073-1	<i>Elementary mathematics</i> - Julien LEROY - [15h Mon. WS]	Q1	30	30	[+]	<b>7</b>
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MATH0069-1	<i>Matrix calculation</i> - Michel RIGO	Q1	30	25	-	<b>7</b>
MATH0070-1	<i>Linear algebra</i> - Michel RIGO	Q2	30	25	-	<b>6</b>
MATH0086-1	<i>Analysis I, part 1</i> - Céline ESSER	Q1	45	30	-	<b>7</b>
MATH0087-1	<i>Analysis I, part 2</i> - Céline ESSER	Q2	35	30	-	<b>6</b>
MATH0495-1	<i>Elements for calculating probabilities</i>	Q1				<b>5</b>
	- <i>Part 1: Analysis tools for probabilities</i> - Laurent LOOSVELDT		6	6	-	
	- <i>Part 2: Probability theory</i> - Laurent LOOSVELDT		20	20	-	
MATH1203-1	<i>Geometry I</i>	Q2				<b>7</b>
	- <i>Elements of affine and Euclidian geometry</i> - Pierre MATHONET		25	15	-	
	- <i>Additional affine and Euclidian geometry</i> - Pierre MATHONET		15	15	-	
MATH1472-1	<i>Descriptive statistics and data analysis</i> - Arnout VAN MESSEM - [10h Mon. WS]	Q2	25	15	[+]	<b>5</b>
MATH2010-1	<i>Mathematical software</i> - Emilie CHARLIER	Q2	15	30	-	<b>4</b>

[...] the programme of the bachelor in mathematics